

Somadutta Bhatta

List of Publications by Year in descending order

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docs citations

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4052
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#	ARTICLE	IF	CITATIONS
1	Emulating the impact of additional proton-proton interactions in the ATLAS simulation by presampling sets of inelastic Monte Carlo events. Computing and Software for Big Science, 2022, 6, 1.	2.9	5
2	Performance of the ATLAS Level-1 topological trigger in Run-2. European Physical Journal C, 2022, 82, 1.	3.9	6
3	Measurement of the c-jet mistagging efficiency in $\sqrt{s}=13$ TeV events using pp collision data at $\sqrt{s}=13$ TeV collected with the ATLAS detector. European Physical Journal C, 2022, 82, 1.	3.9	14
4	Search for Higgs boson decays into a pair of pseudoscalar particles in the final state with the ATLAS detector in $\sqrt{s}=13$ TeV collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2022, 2022, 1.	4.7	17
5	Search for exotic decays of the Higgs boson into $b\bar{b}$ and missing transverse momentum in pp collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2022, 2022, 1.	4.7	2
6	Observation of electroweak production of two jets in association with an isolated photon and missing transverse momentum, and search for a Higgs boson decaying into invisible particles at $\sqrt{s}=13$ TeV with the ATLAS detector. European Physical Journal C, 2022, 82, 1.	3.9	8
7	Higher-order transverse momentum fluctuations in heavy-ion collisions. Physical Review C, 2022, 105, .	2.9	4
8	Search for Higgs bosons decaying into new spin-0 or spin-1 particles in four-lepton final states with the ATLAS detector with 139 fb^{-1} of pp collision data at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2022, 2022, 1.	4.7	10
9	AtlFast3: The Next Generation of Fast Simulation in ATLAS. Computing and Software for Big Science, 2022, 6, 1.	2.9	23
10	Measurement of the energy response of the ATLAS calorimeter to charged pions from $W \rightarrow \mu \nu$ events in Run-2 data. European Physical Journal C, 2022, 82, 1.	3.9	4
11	The ATLAS inner detector trigger performance in pp collisions at $\sqrt{s}=13$ TeV during LHC Run 2. European Physical Journal C, 2022, 82, 1.	3.9	5
12	Search for flavour-changing neutral-current interactions of a top quark and a gluon in pp collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. European Physical Journal C, 2022, 82, .	3.9	7
13	Measurement of the energy asymmetry in $t\bar{t}$ production at $\sqrt{s}=13$ TeV with the ATLAS experiment and interpretation in the SMEFT framework. European Physical Journal C, 2022, 82, .	3.9	2
14	Search for resonant pair production of Higgs bosons in the $b\bar{b}$ final state using $\sqrt{s}=13$ TeV collision data with the ATLAS detector. European Physical Journal C, 2022, 82, 1.	4.7	10
15	Determination of the parton distribution functions of the proton using diverse ATLAS data from pp collisions at $\sqrt{s}=7, 8$ and 13 TeV. European Physical Journal C, 2022, 82, 1.	3.9	12
16	Search for single production of a vectorlike top quark decaying into a Higgs boson and top quark with fully hadronic final states using the ATLAS detector. Physical Review D, 2022, 105, .	4.7	10
17	Search for long-lived charginos based on a disappearing-track signature using 136 fb^{-1} of pp collisions at $\sqrt{s}=13$ TeV with the ATLAS detector. European Physical Journal C, 2022, 82, .	3.9	13
18	Search for squarks and gluinos in final states with jets and missing transverse momentum using 139 fb^{-1} of $\sqrt{s}=13$ TeV pp collision data with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	37

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19	Search for Higgs boson production in association with a high-energy photon via vector-boson fusion with decay into bottom quark pairs at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	6
20	Search for new phenomena in events with two opposite-charge leptons, jets and missing transverse momentum in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	22
21	Search for pair production of scalar leptoquarks decaying into first- or second-generation leptons and top quarks in proton-proton collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	18
22	Optimisation of large-radius jet reconstruction for the ATLAS detector in 13 TeV proton-proton collisions. European Physical Journal C, 2021, 81, 1.	3.9	15
23	Search for heavy resonances decaying into a pair of Z bosons in the $e^+e^- \rightarrow e^+e^- Z Z$ and $e^+e^- \rightarrow e^+e^- \gamma Z$ final states using 139 fb ⁻¹ of proton-proton collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	40
24	Search for new phenomena in final states with b-jets and missing transverse momentum in $\sqrt{s} = 13$ TeV pp collisions with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	18
25	Search for a heavy Higgs boson decaying into a Z boson and another heavy Higgs boson in the $e^+e^- \rightarrow e^+e^- \gamma Z$ and $e^+e^- \rightarrow e^+e^- W W$ final states in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	26
26	Search for doubly and singly charged Higgs bosons decaying into vector bosons in multi-lepton final states with the ATLAS detector using proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2021, 2021, 1.	4.7	23
27	Search for new phenomena in final states with b-jets and missing transverse momentum in $\sqrt{s} = 13$ TeV pp collisions with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	64
28	Measurements of $W+W \rightarrow 1$ jet production cross-sections in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	8
29	Search for charged Higgs bosons decaying into a top quark and a bottom quark at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	46
30	Measurements of Higgs bosons decaying to bottom quarks from vector boson fusion production with the ATLAS experiment at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2021, 81, 1.	3.9	14
31	Search for pair production of third-generation scalar leptoquarks decaying into a top quark and a \bar{l}_ν -lepton in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	27
32	Search for Displaced Leptons in $pp \rightarrow s \bar{s} + \text{lepton} + \text{lepton} + \text{jet} + \text{MET}$ collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Physical Review Letters, 2021, 127, 051802.	7.8	17
33	Search for supersymmetry in events with four or more charged leptons in 139 fb ⁻¹ of $\sqrt{s} = 13$ TeV pp collisions with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	12
34	Determination of the parton distribution functions of the proton from ATLAS measurements of differential $W \rightarrow \mu \nu$ and Z boson production in association with jets. Journal of High Energy Physics, 2021, 2021, 1.	4.7	10
35	Measurements of differential cross-sections in four-lepton events in 13 TeV proton-proton collisions with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	8
36	A search for the decays of stopped long-lived particles at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	5

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37	Muon reconstruction and identification efficiency in ATLAS using the full Run 2 pp collision data set at $\sqrt{s}=13$ TeV. European Physical Journal C, 2021, 81, 1.	3.9	82
38	Performance of the ATLAS RPC detector and Level-1 muon barrel trigger at $\sqrt{s}=13$ TeV. Journal of Instrumentation, 2021, 16, P07029.	1.2	6
39	Search for squarks and gluinos in final states with one isolated lepton, jets, and missing transverse momentum at $\sqrt{s}=13$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	13
40	The ATLAS Fast Tracker system. Journal of Instrumentation, 2021, 16, P07006.	1.2	5
41	Measurements of sensor radiation damage in the ATLAS inner detector using leakage currents. Journal of Instrumentation, 2021, 16, P08025.	1.2	3
42	Measurements of the inclusive and differential production cross sections of a top-quark-antiquark pair in association with a Z boson at $\sqrt{s} = 13$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	12
43	Search for New Phenomena in Final States with Two Leptons and One or No b-Tagged Jets at $\sqrt{s}=13$ TeV Using the ATLAS Detector. Physical Review Letters, 2021, 127, 141801.	7.8	14
44	Search for dark matter produced in association with a single top quark in $\sqrt{s}=13$ TeV pp collisions with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	9
45	Search for dark matter in events with missing transverse momentum and a Higgs boson decaying into two photons in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	12
46	Non-flow effects in correlation between harmonic flow and transverse momentum in nuclear collisions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2021, 822, 136702.	4.1	10
47	Search for R-parity-violating supersymmetry in a final state containing leptons and many jets with the ATLAS experiment using $\sqrt{s} = 13$ TeV proton-proton collision data. European Physical Journal C, 2021, 81, 1.	3.9	7
48	Measurement of the $t\bar{t}$ production cross section in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	10
49	Search for dark matter produced in association with a Standard Model Higgs boson decaying into b-quarks using the full Run 2 dataset from the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	10
50	Measurement of the production cross section of pairs of isolated photons in pp collisions at 13 TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	4
51	Search for exotic decays of the Higgs boson into long-lived particles in pp collisions at $\sqrt{s} = 13$ TeV using displaced vertices in the ATLAS inner detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	4
52	Search for chargino-neutralino pair production in final states with three leptons and missing transverse momentum in $\sqrt{s} = 13$ TeV pp collisions with the ATLAS detector. European Physical Journal C, 2021, 81, 1.	3.9	28
53	Configuration and performance of the ATLAS b-jet triggers in Run 2. European Physical Journal C, 2021, 81, 1.	3.9	7
54	Search for Lepton-Flavor Violation in $Z \rightarrow \bar{l}l$ -Boson Decays with Leptons with the ATLAS Detector. Physical Review Letters, 2021, 127, 271801.	7.8	8

#	ARTICLE	IF	CITATIONS
55	Search for charginos and neutralinos in final states with two boosted hadronically decaying bosons and missing transverse momentum in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Physical Review D, 2021, 104, .	4.7	25
56	Search for new phenomena in pp collisions in final states with tau leptons, b -jets, and missing transverse momentum with the ATLAS detector. Physical Review D, 2021, 104, .	4.7	14
57	Measurement of b-quark fragmentation properties in jets using the decay $B_{\pm} \rightarrow J/\psi K_{\pm}$ in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, 1.	4.7	3